Quality Management Plan
(QMP)

Version 2.2.0

Disability Insurance Automation Phase 3
(DIAP3)

February 14, 2007

Revision History

REVISION	DATE OF RELEASE	DIAP3 SHAREPOINT SITE REFERENCE #	PURPOSE
2.1.0 2.2.0	02/02/07 02/14/07		Initial release of the plan for review by the DIAP3 Core Team Incorporation/resolution of all DIAP3 Project Core Team comments and concerns

Reviewers

DRAFT REVIEWERS		
Name	**Title**	**Version**
Bob Bradshaw	DIAP3 Joint Project Manager	2.2.0
Linda Fredericksen	DIAP3 Joint Project Manager	2.2.0
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Approvals

Name and Title	Date
Bob Bradshaw, Joint Project Manager	3/14/2007
Linda Fredericksen Joint Project Manager	3-14-07

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DIAP3 Quality Management Plan (QMP)

General Information

Information to be provided in this section gives a specific name to the project as well as pertinent information about the personnel involved. (See IT PMM Section 3.23 for more detail)

Project ID	7100-192	Date	February 14, 2007
Version	2.2.0	Approval Date	
Project Name	Disability Insurance Automation Phase 3	Project Criticality Rating	High
		Project Sponsor	Sandra Poole
Controlling IT Division	TFSD	Joint Project Managers	ITB: Bob Bradshaw DIB: Linda Fredericksen
Program Branch	DIB	Author	Jorge C. Muñoz

1. Introduction

This Quality Management Plan was prepared in accordance with the Employment Development Department (EDD) Project Management Methodology (PMM), but enhanced to meet the needs of this project.

1.1 Purpose of the Document

This document covers both Quality Assurance (QA) and Quality Control (QC). The scope of this document is limited to the project phases of initiation through procurement. This document will be updated with System Testing Group (STG) and Application Services Division (ASD) Product QA processes at System Integrator (SI) Vendor selection and until project closeout.

1.2 Project Background

The Disability Insurance Branch (DIB) intends to undertake a business-based procurement to solicit technical solutions from SI vendors. Once a proposal is accepted and costs are finalized, DIB will complete and submit a Special Project Report (SPR) to the Department of Finance (DOF) describing the proposed solution, scope of work, and costs. The DIB believes the business-based procurement approach provides the best opportunity to acquire an automated solution. It will allow vendors the freedom to propose creative solutions based on their knowledge and experience. QA and QC metrics will be defined based on technical solutions provided by the SI Vendor.

1.3 References

IEEE Standard 730-2002, IEEE Standard for Software Quality Assurance Plans, IEEE Computer Society.

IEEE Standard 12207.0-1996, Standard for Information Technology Software Life Cycle Processes, IEEE Computer Society.

IEEE Standard 12207.1-1997, Standard for Information Technology Software Life Cycle Processes, Life Cycle Data, IEEE Computer Society.

IEEE Standard 1012-1998, Standard for Software Verification and Validation, IEEE Computer Society.

IEEE Standard 828- 1998, IEEE Standard for Software Configuration Management Plans

IEEE Standard 1233- 1996 Guide for Developing System Requirements Specifications

IEEE Standard 1058- 1998, Standard for Software Project Management Plans

IEEE Standard 1061-1998, Software Quality Metrics Methodology

IEEE 1062-1998, Recommended Practice for Software Acquisition, 8 Dec 98

IEEE 1298-1992, Software Quality Management

IEEE 8402-1994, Quality Management and Assurance

IEEE 1490- 2003, Adoption of Project Management Institute's Project Management Body of Knowledge, PMBOK®

IEEE 1540 – 2001, Standard for Software Life Cycle Processes – Risk Management

DGS State Administrative Manual (SAM), Internal Procurement Change Management Plan

State Administrative Manual, Chapter 4800

DOF Information Technology Project Oversight Framework, Budget Letter 03-04, dated Feb 07, 2004 DOF.

2. Quality Assurance Management Approach

2.1 Organization

The QA functions are part of the DIAP3 Project organization. The QA Managers report directly to the Joint Project Managers (JPM), but is responsible for working with the DIAP3 Core Team on a day-to-day basis. Participants and their roles and responsibilities are defined in the DIAP3 Communication Management Plan and supporting plans. This Quality Management Plan addresses only those tasks, roles, and responsibilities that are relevant to QA.

2.1.1 QA Participants

The organization chart in the Figure 1 Link below identifies the relationship of the QA Managers with the rest of the Project.

Figure 1 – DIAP3 Organization Chart

2.1.2 Roles and Responsibilities

Total project quality management is the responsibility of every member of the project team. There are, however, five roles in the Core Team that are directly responsible for QA.

ITB Quality Manager The Quality Assurance Manager is responsible for providing the ongoing quality assurance services, including providing oversight to DIAP3 Core Team processes and procedures, monitoring of various metrics and the application of EDD or industry best practices and approved project standards. In addition, the QA Manager will be involved in reviewing and approving, from a quality standpoint, the Project deliverable products identified in this plan. The QA Manager is responsible for developing the QA Work Plan to assure availability of adequate quality assurance support throughout the project. Outlined below are the task responsibilities of the QA Manager.

- Identify Project Standards
- Generate monthly and weekly status reports
- Conduct reviews of project deliverables and provide written reports related to standards compliance, identification of process improvement opportunities, correctness, completeness, anomalies and recommendations.
- Provide QA inputs for developing project work products.
- Provide oversight of the DIAP3 Core Team processes and procedures and provide evaluation reports related to standards compliance, identifying process improvement opportunities.
- Audit adherence to the EDD PMO standards
- Coordinate activities between QA and IV&V and IPOC
- Perform review of QA portions of vendor proposals and provide recommendations
- Support oversight activities by control agencies
- Develop and execute QA Plan and QA Work Plan
- Maintain the QA Work Plan which is included in the DIAP3 Master Work Plan
- Collect and analyze project metrics
- Support Requirements Traceability Planning
- Support issue and action item tracking and resolution
- Audit all Core Team processes including risk management

DIAP3 ITB/DIB Project Managers: The DIAP3 Joint Project Managers are the liaison between Quality Assurance and the Project Team. The QA Manager works with the Joint Project Managers on a day-to-day basis to assure quality for the project.

DIB Quality Manager: The DIB QA Manager is responsible for overseeing all Product and program/business aspects of quality for the DIAP3 Project, and reports to the DIAP3 Joint Project Managers. The DIB QA Manager is responsible for the resolution of quality issues for the delivery of the DIAP3 Project business requirements. The DIB QA Manager is ultimately responsible for the final decision on Product and program/business quality actions, in coordination with the Joint Project Managers.

Independent Verification and Validation (IV&V) - IV&V reports to the Project Oversight Review Team (PORT). IV&V is responsible for providing oversight for the Core Team, including the QA functions. The IV&V vendor will begin providing service after the award of the IV&V Contract for the DIAP3 project.

Independent Project Oversight Consultant (IPOC) - IPOC externally reviews and reports on the project management performance as defined by the Department of Finance (DOF) Project Oversight Framework to ensure the continuing suitability and effectiveness of the QA Process. The IPOC also reports to the PORT.

Note: IPOC and IV&V will be performed by different vendors.

2.1.3 Relationship to Contractor(s) QA

The DIAP3 Core Team QA provides oversight for the project's prime solution vendor, working with the contractor QA team to ensure the highest quality for the project. The DIAP3 Core Team QA will review contractor QA processes, reviews and audits on a sampling basis and coordinate with contractor QA to conduct process audits.

2.1.4 Relationship to IV&V

IV&V reports to the PORT and is responsible for auditing the DIAP3 Core Team and project's prime solution vendor QA. Core Team QA will review and validate IV&V reports and recommendations to incorporate them into project processes and products.

2.2 Tools, Techniques and Methods

For all QA reviews and audits, the following will dictate the way in which QA will be conducted. The project uses standard tools, to be consistent with all project stakeholders and facilitate data exchange.

Each work product is reviewed against the standard governing its production as well as against applicable project practices. For each process, there is a plan, which is reviewed against the applicable standard. After the plan has been released, the corresponding process is audited on a predetermined frequency, depending on its complexity and criticality, to ensure that the plan is being followed.

The sections below define the applicable tools and techniques for quality assurance for both project work products and processes.

2.2.1 Project Tools

The project shall use the standard tools provided to the project by the State, consistent with State practices and at version levels specified by the State, in the preparation of all project correspondence and deliverables. The following process tools will facilitate QA and QC and are being utilized for the following purposes:

- Microsoft Office:
  - Word – Document development and tracking
  - Excel – Gathering project metrics
- Microsoft Project – Project Schedule
- SharePoint – Manage Issue, Risk and Change and the DIAP3 Project Documentation Repository
- Rational Requisite Pro - Requirements Management

2.2.2 Techniques

The DIAP3 Core Team QA approach to quality assurance employs a variety of methods including:

- Formal, structured reviews/audits of project work products, project work processes, and project management documents as identified and scheduled in the DIAP3 Project Schedule.
- Maintenance of key project metrics to maintain a historical record of project performance.
- Interface to DIAP3 Sharepoint Site issues, risk, and change database to track the manner in which corrective action is being implemented.
- Status Reporting via the RMS Time Accounting System to communicate progress and effectiveness.
- Coordination with other oversight and assessment entities to ensure compliance with oversight agency requirements
- Executing Quality Work Plan to ensure all tasks are completed as required.

2.2.3 Methodologies

Quality Assurance is the application of operational techniques and activities to evaluate both processes and deliverables and to eliminate causes of unsatisfactory performance at relevant stages of deliverable production. Quality Control is concerned with the detection of defects. Standards and procedures are used in the project to prevent defects from occurring in the first place. Reviews, audits and tests are used to verify that requirements are being met and to validate completeness and consistency of each deliverable. Quality Assurance tasks, which focus on prevention, are identified in the schedule and their progress can be monitored via project cost and schedule management systems. The quality management process is used throughout the DIAP3 IT Project life cycle as ongoing quality assessments and actions are taken.

Quality Assurance deals with the prevention of defects. This involves the development and implementation of the necessary plans and actions to provide confidence through verifications, reviews and the ongoing evaluation of the quality factors which affect the adequacy of the design, specification, development, installation and use of the product or service. These same plans define the activities used to evaluate the quality of a product or service deliverable for Quality Control. Quality Assurance includes a continuing evaluation of the adequacy and the effectiveness of processes, procedures and deliverables with timely corrective measures and feedback.

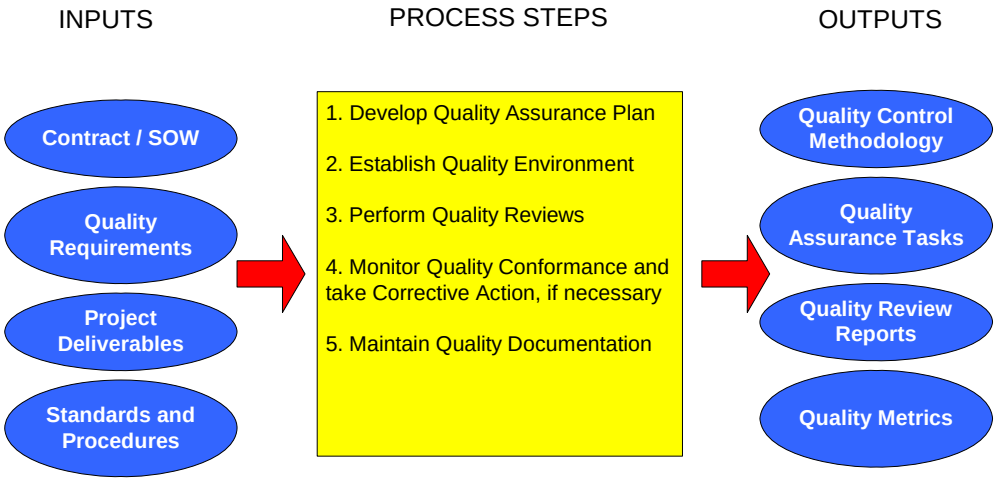
Quality Control deals with the detection of defects. Quality control is the operational techniques and activities that are used both to evaluate processes and deliverables and to eliminate causes of unsatisfactory performance at relevant stages of deliverable production. It involves the audit, review and/or testing of the resulting specifications, products or service to determine that they conform to the stated requirements. The ITB Quality Manager will be embedded in the end-to-end product delivery process to ensure the quality control of the expected product. Applicable standards applied will be determined at SI Vendor selection and added to this plan.

Key success factors emphasized in the quality management approach for this project are:

- ✓ Client participation
- ✓ Management commitment
- ✓ Integration with other related components of the project plan
- ✓ Proven standards and procedures
- ✓ Continuous monitoring and follow-up
- ✓ Independent oversight and review

The quality management process is used to identify the project's quality requirements early in the project life cycle and to put the plans and processes in place to verify and validate that the system solution meets or exceeds requirements. The quality management process also includes periodic Quality Assurance reviews and audits that are used to confirm that the plans are being successfully executed and that feedback for updates is being provided when necessary. The diagram below illustrates the quality management process.

Figure 2



2.3 Standards, Practices, and Conventions

2.3.1 Work Product and Process Standards

Whenever possible, a project product will be developed in compliance with EDD policies and guidelines or a widely recognized standard, such as IEEE or ISO standards. If an appropriate standard does not exist, a project practice will be applied.

For some activities such as development coding, conventions are appropriate to ensure the resulting product(s) have a consistent style. If practices or conventions are required for a product, they are specifically identified.

For each auditable process, a plan is developed in compliance with a widely recognized standard. Each auditable process must be executed in compliance with the published plan. In some cases, there may be more than one standard that applies to the process. When that occurs, the process will be reviewed against both. If there is a conflict between two applicable standards (practices or conventions) the following priority will be observed unless an exemption or waiver has been requested and approved:

- State of California Standards
- EDD Standards
- Project Standards
- Industry Standards
  - IEEE
  - PMBOK
  - SEI CMM

QA will review processes, products, and procedures to assure adherence to relevant industry standards including, but not limited to IEEE standards, EDD's Information Technology (IT) Project Management Methodology (PMM), Systems Development Life

Cycle (SDLC) Standards, and the Project Management Institute's Project Management Body of Knowledge (PMBOK®).

2.3.2 Practices

Where standards are either not available or not appropriate, project quality will be evaluated by comparing processes used with the various project plans and best business practices. There will be a focus on continuous process improvement throughout the life of the project. Changes and Action Items resulting from the review of the plan and audit of the process will be documented and discussed with the Joint Project Managers. If deemed necessary, the action items will be logged, assigned to the responsible team member, and resolved in accordance with the Change Management Process defined in the Change Management Plan.

2.3.3 Conventions

When applicable standards and practices are not available, internal project conventions will be used to promote consistency. These conventions, such as Joint Project Managers' preferred and lessons learned styles, will be used to evaluate the process or work product being reviewed or audited.

2.4 Metrics

The gathering of pertinent data and the subsequent analysis of the resulting metrics are critical for integrity of the project throughout its life cycle. The use of metrics reduces subjectivity in the assessment and control of quality by providing a quantitative basis for making decisions. However, the use of metrics does not eliminate the need for human judgment in their evaluation. The use of metrics within a project is expected to have a beneficial effect by making quality visible.
Information derived from a metrics program is used as one of the primary inputs for program decisions and, as such, the metrics program will be continuous. The metrics program needs to include adequate measurement in each of five categories:

- Early indications of problems.
- The quality of the products.
- The effectiveness of the processes.
- The conformance to the process.
- The provision of a basis for future estimation of cost, quality, and schedule.

QA has organizational oversight responsibility for identification, collection, analysis, and reporting of metrics throughout the program's life. The selection of metrics and data items that need to be gathered must be tailored with the recognition that there is a cost associated with such efforts. With that fact in mind, the list of metrics in Table 1 will be collected for the project.

The Joint Project Managers are currently reporting on Cost, Schedule, and Scope metrics to the Department of Finance, Steering Committee, and Project Sponsor. The

reporting is currently being done via the DIAP3 Independent Project Oversight Report (IPOR) and the DIAP3 Weekly Status Report. Both of these reports are available for viewing by the DAIP3 Project Core Team and other interested parties. In the future, additional metrics will be used and more specificity will be added to the existing metrics.

Table 1 - Project Metrics to Be Collected

Metric	Purpose	Data to be Collected	Tracking Tool/Analysis Form	Report Form
Project Status				
Task Completion Monthly	Task Schedule Variance: Provides an early indication of the completion status of the project	Scheduled Duration Actual Duration % Complete % Schedule Variance for each project task in the Project Master Work Plan WBS, including QA -	MS Project Trend	Monthly MS Project Completion Report.
Milestone Performance	Provides an indication of the completion status of the project	Schedule milestone start and completion dates Actual milestone start and completion dates	MS Project Trend	Monthly Status Report
Deliverables Management				
Planned Deliverables	Ensures the timely submission of deliverables as required by the contract and SI Vendor Project Management Plan.	Planned versus actual delivery dates	Microsoft Excel Trend	Monthly Status Report of planned versus actual delivery of SI Vendor deliverables to Technical Project Manager.
Reserved for future use				
"				
"				
"				
"				
"				
"				
"				

Metric	Purpose	Data to be Collected	Tracking Tool/Analysis Form	Report Form
Issues Management				
Issue Statistics	Indicates trends related to quality of products and/or issue management effort requirements.	All open issues, current status, phase, category, scheduled and actual date for Issue Assessment resource assignment.	DIAP3 SharePoint Site Report Trend	DIAP3 SharePoint Site Report for weekly Project Status Meeting – includes: All open records and current status Timeframe variance between planned timeframe and actual timeframe to assign a resource for the Issue Assessment Overdue Issue Assessments sorted by category and then sorted by days overdue. Total numbers of issues overall and by phase that are closed, in progress, on hold, not assigned, approved or cancelled.
Change Management				
Requirement Changes	Indicates requirement stability. Indicates scope stability.	Number of closed issues that resulted in requirement changes Note: Will require DIAP3 SharePoint Site change to identify issue type.	DIAP3 SharePoint Site Trend	After RFP baseline has been established, generate report from DIAP3 SharePoint Site indicating the number of new, changed or deleted requirements. QA to present at the Project Status meeting

Metric	Purpose	Data to be Collected	Tracking Tool/Analysis Form	Report Form
Change Request Item Reporting	Indicates the performance of the Change assignment process.	All open change records, current status, phase, category, scheduled and actual date for Impact Assessment resource assignment.	DIAP3 SharePoint Site Trend	All open change records and current status. Timeframe variance between planned timeframe and actual timeframe to assign a resource for the Change Assessment. Overdue Impact Analysis sorted by category and then sorted by days overdue. Total numbers of changes records overall and by phase that are in progress, on hold, not assigned, cancelled, approved and rejected.
Risk Management				
Project Risk Level	Indicates overall project risk level.	Risk probability and estimated impact for each individual risk.	DIAP3 SharePoint Site	Monthly report on risk exposure for top ten risks and overall risk level for the project.
Process Performance				
Internal Process Audit Findings	Indicates level of project quality and quality trends. May indicate changing QA resource needs.	Number of deficiencies by severity by audit Audit occurrence date Audit deficiency closure date.	MS WORD – Audit Reports Trend	Monthly Quality Report Average number of deficiencies by severity per audit Mean Time To Closure for reporting period.
External Assessment IV&V	Indicates overall project process quality and quality trends. May indicate changing QA resource needs.	Number of deficiencies by severity by assessment Assessment occurrence date Assessment deficiency closure date.	TBD TBD	All processes will be reviewed by third parties as scheduled. 3rd parties will report findings to QA and project management.

Metric	Purpose	Data to be Collected	Tracking Tool/Analysis Form	Report Form
Deliverable Management				
Deliverable	Measures the effectiveness of the process, setting deliverable expectations and managing changes, meeting review due dates, and the overall performance of the project team in meeting scheduled dates.	Draft Version: Scheduled Date, Actual Date Final Version: Scheduled Date, Actual Date for each deliverable scheduled for review, or approved during the prior week.	MS Project Trend	Deliverable Management Report Number of deliverables meeting specified due dates (including draft review dates). Variance between the planned final review date to the actual review date. Total path duration (amount of time from draft submission to acceptance).

2.5 Quality Assurance Documentation and Reporting

2.5.1 Review/Audit Reports

QA reports/checklists will be developed for each type of Project Plan review and Process audit. All Project Deliverables will be located in the DIAP3 SharePoint Site according to the practice outlined in the DIAP3 Library and Document Management Plan. The content of the report will vary depending upon the type of review or audit, though the general format will remain the same. Reviews and audits utilize a checklist. The checklist provides uniformity for the review or audit, making sure that nothing is missed and that a uniform level of rigor and detail required for the review or audit is maintained. Checklists, as the primary content of a report, will be developed as required, using a just in time approach. The checklist/report will then be utilized for subsequent audits of the same type. Findings and observations will be written for each item on the checklist. A general comments section at the end of the report will contain other important observations. Appendix B provides a Review/Audit Checklist and Report example.

- In addition to a checklist, document reviews utilize Microsoft Word when possible, with change tracking turned on. All comments made this way in the reviewed document are provided to the appropriate project team member.
- Informal reviews or observations resulting from general project involvement will be communicated either verbally to the DIAP3 Joint Project Managers, the project team member(s), or entered as a change, if required.

2.5.2 Monthly Status Reports

- ***IPOR Report*** – the formal reporting of IT project oversight findings. It is to be completed by the independent oversight teams that perform independent oversight as described in the Department of Finance IT Project Oversight Framework. The design of this report is intended to meet the need for concise, risk oriented reporting to top management. The IPOC vendor is responsible for preparing this report. If the IPOC vendor is not available, the PORT is responsible for preparing the report.

- ***Monthly Quality Assurance Status Report*** – the following information will be included in the monthly status report:

  QA Tasks Accomplished
  Key Upcoming Tasks in next period
  Planned versus Actual delivery of Deliverables

- ***Monthly Quality Assurance Activity Report*** – the following information will be addressed in the monthly QA report to the JPM:

  Audits, reviews, and assessments conducted by QA
  Results provided by QA including any anomalies and deviations
  QA recommendations on project processes and products

- ***As Required Quality Assurance Plan Review Report*** — the following information will be addressed in the monthly QA report to the JPM:

  Plan reviews conducted by QA Manager
  Plan Compliance with standards
  Plan corrective actions

2.5.3 Weekly Meeting Status Reports – Verbal

At the weekly project status meetings, QA will verbally summarize significant events and critical issues that are relevant to the project QA activity.

2.5.4 Issue Reporting and Resolution Process

Issues identified during reviews and audits of documentation, and the processes that produced the documents, will be entered into DIAP3 SharePoint Site Issue, Risk, and Change Database as Issues and prioritized. Action items will be generated at the project status meeting and QA will track them until resolved in accordance with the Issue Management Process. Action items will be tracked in the DIAP3 SharePoint Site Action Item Database QA will include a summary status of these issues in the Monthly Status Report.

- **Deficiency Management Process**

Deficiencies identified during reviews and audits will be entered in DIAP3 SharePoint Site as Changes and tracked to resolution in accordance with the Change Management Process defined in the Change Management Plan. A deficiency is defined as an identified deviation from a contractual expectation or obligation with a contractor.

- **Iteration Process**

When a document is not approved as a result of a QA review, the product is returned to the project staff with comments. Subsequent QA review will consist of ensuring that the comments were appropriately resolved. This approach applies whether or not a comment/deficiency is entered in DIAP3 Sharepoint Site as an issue.

- **Deviation Process**

Deviations from the standards governing a work product are acceptable only if the DIAP3 Joint Project Managers and the Project Sponsor have approved such deviations.

- **Waivers**

Waivers for required actions will processed as a Change and subject to the Change Management process defined in the Change Management Plan.

2.6 Quality Assurance Task Frequency

Table 2 – Quality Assurance Task Frequency defines each of the tasks for which QA is responsible, the frequency in which the task will be performed, the deliverable and the method of delivery.

Table 2 – Quality Assurance Task Frequency

Task	Frequency	Task description	Deliverable and Method of distribution
		Meetings	
Attend Standing Project Meetings	Weekly	Provide verbal QA status, discuss project risks.	Oral presentation, questions, and answer at Project Status Meetings
		Status Reports	
Prepare QA Reports	Monthly	QA Activity Report – Documents the audits, reviews, and assessments conducted by QA and the results and recommendations provided by QA.	QA Activity Report - Electronic copy stored in DIAP3 SharePoint Site, route reports to the Joint Project Managers.
Prepare Status Reports	Monthly	QA Status Report – Prepare for project management. Contains QA tasks accomplished, upcoming key tasks, hours against budget.	QA Status Report - Electronic copy stored in DIAP3 SharePoint Site, route reports to Joint Project Managers.
		Reviews/Audits	
Review Plans	Initial Review as scheduled	QA Plan Review -- Perform an initial review of all project plans and report on completeness and clarity, consistency with other plans and compliance with standards.	QA Plan Review Report Electronic copy stored in DIAP3 SharePoint Site, route reports to Joint Project Managers.
Audit Project Funding & Cost Estimates	Quarterly	QA Audit -- Perform an audit to Validate project cost assumptions, report on project funding costs, and perform in-house fiscal audits.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to Joint Project Managers.

Task	Frequency	Task description	Deliverable and Method of distribution
Audit Change Management (Includes Issues Management)	Bi-Monthly	Perform an audit of the Change Management process. Utilizing a standard checklist, perform a peer review with the process owner. Ensure that change management procedures are executed correctly and perform sampling of database data.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Requirements Management	Bi-Monthly	Perform an audit of the Requirements Management process. Utilizing a standard checklist, perform a peer review with the process owner. Perform sampling of ReqPro data. Review the traceability matrix identifying errors and provide recommendations for corrective action.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Document Management (Includes Configuration Management)	Quarterly Q4	Perform an audit of the Document Management process. Utilizing a standard checklist, perform a peer review with the process owner. Perform sampling of DIAP3 Sharepoint Site data to insure configuration items are stored according to plan.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Project Management	Quarterly Q4	Perform an audit of the Project Management process. Utilizing a standard checklist, perform a peer review with the process owner. Perform sampling of Project data.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Proposal Evaluation	According to Evaluation Plan	Perform an audit of the Proposal Evaluation Process and sub-processes. Utilizing a standard checklist, perform a peer review with the process owner.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Deliverable Management	Q4	Perform an audit of the Deliverable Management process. Utilizing a standard checklist, perform a peer review with the process owner. Perform sampling of Project data.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Contract Management	Quarterly	Perform an audit of the Contract Management Process. Utilizing a standard checklist, perform a peer review with the process owner.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
Audit Communication Process	Quarterly	Perform an audit of the Communications Management Process. Utilizing a standard checklist, perform a peer review with the process owner.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.

Task	Frequency	Task description	Deliverable and Method of distribution
Audit Governance	Semi-Annually	Perform an audit of Governance Process. Utilizing a standard checklist, perform a peer review with the process owner.	QA Audit Report Electronic copy stored in DIAP3 SharePoint Site, route reports to project management.
		Project Metrics	
Project Metrics Reporting	Monthly	Ensure that project metrics are defined, collected, analyzed, reported, and used.	Included in IPOR and Weekly Project Status Report. Electronic copy stored in DIAP3 SharePoint Site
		Risk Management	
Risk Management	Continuous	Document risks and work with risk owners on the mitigation strategy and risk response. ITB Quality Manager will work with the DIAP3 Risk Manager to ensure that all risk attributes are provided and accurate.	Included in IPOR and Weekly Project Status Report. Electronic copy stored in DIAP3 SharePoint Site
Develop Risk Management Plan	Initial Development	Review Risk Management Plan for content, accuracy, completeness, and compliance with the EDD's PMM. .	Risk Management Plan Electronic copy stored in DIAP3 SharePoint Site. Route to Project Managers.
		Other	
Support Requirements Traceability Planning	Initial Setup and under change control	Assist the System Engineering with the initial setup of the traceability matrix for Requirements Management.	Traceability Matrix Database stored in ReqPro.
Change tracking	Continuous	Attend all project status meetings and Change management meetings to support issue and action item resolution. Report on issues/changes as project metrics.	Included in Weekly Project Status Report. Change status stored in DIAP3 SharePoint Site.
Issue tracking	Continuous	Attend all project status meetings and Issue management meetings to support issue and action item resolution. Report on issues/changes as project metrics.	Included in Weekly Project Status Report. Issue status stored in DIAP3 SharePoint Site.
Action Item tracking	Continuous	Attend all project status meetings and Action Item management meetings to support issue and action item resolution. Report on issues/changes as project metrics.	Included in weekly Project Status Report. Action Item status stored in DIAP3 SharePoint Site.

3. Product Quality Control

Product QC, for the project, is the QC activity responsible for ensuring the quality of products, other than correspondence, produced by the project for external distribution. The specific products monitored by QC are listed in Appendix A.

3.1 Management of Product QC

Product QC will be managed in such a way as to ensure that documents and other products, such as the initial requirements database, that are delivered by the project are in compliance with the appropriate standards and meet the requirements of the procurement process.

3.1.1 Product QC Approach

Product QC focuses primarily on reviewing documents. For each document, QC will conduct both preliminary reviews and final reviews. The purpose of the preliminary review is to ensure that the documents are being developed in accordance with the governing standard, as well as a review for correctness, completeness, and reporting of anomalies against those standards. The intention is to reduce rework later in the document's development cycle and to facilitate an on-schedule delivery. The final review is conducted on the complete document, prior to release to project-external reviewers, to ensure the document meets all relevant standards and all of the QC recommendations from the preliminary review have been addressed.
Documents for purposes of this plan are divided into two categories – those that can be reviewed against external standards and those that do not have external standards to review against and therefore utilize internal standards specific to the project (practices). External standards refer to public (e.g. IEEE Requirements Management) established standards. The Joint Project Managers will review, or delegate to appropriate project members to review certain documents against internal standards, unless a QC review is requested. Documents to which internal standards will be applied could be reviewed, however, as a part of a QC sampling during a QA audit.

QC will review the last draft version of documents prior to release to the Control Agency. QC will review the documents for consistency, appropriateness and adherence to project standards. The final draft will be reviewed for style, format, and incorporation of previously identified review comments.

Product QC for the Systems Development Life Cycle (SDLC) will be addressed when the SI Vendor is selected and the DIAP3 Core Team is aware of the SDLC environment chosen by the SI Vendor.

3.2 Management and Direction of Product Quality Control Activities

3.2.1 Management and Technical Review Support

In addition to formal reviews, QC will review products that are in process. The goal is to provide guidance to staff developing the product to make sure that when the product is completely developed it will comply with the applicable standard.

3.2.2 Baseline Change Assessment

When a product is being re-baselined, QC will review the impact analysis to determine the quality impact of the change on the project. The corresponding QC analysis summarizes the results from the baseline change record impact analysis assessment task along with the areas affected by the change. This could include areas that have internal/ external interfaces, share data, pass control or receive control from the directly affected area. The report also identifies which QC, validation, verification, and management tasks must be re-performed as a result of each change and any additional validation, verification tasks that must be included. The actual change process will be in compliance with the DIAP3 Configuration Management Plan.

The impact will be documented in a Baseline Change Assessment Report. This assessment will only be performed if the change is significant and the product is particularly critical to the success of the project. This is part of the Change Management Process under the Change Management Plan and is included in this plan for reference only.

3.3 SI Project Management Phase Activities

The details of these activities will be documented and published once a SI vendor has been selected for the DIAP3 Project.

3.4 System Development Phase Activities

The details of these activities will be documented and published once a SI vendor has been selected for the DIAP3 Project.

3.5 System Implementation Phase Activities

The details of these activities will be documented and published once a SI vendor has been selected for the DIAP3 Project.

3.6 Maintenance and Operations Phase Activities

The details of these activities will be documented and published once a SI vendor has been selected for the DIAP3 Project.

3.7 Closeout Phase Activities

The details of these activities will be documented and published once a SI vendor has been selected for the DIAP3 Project.

4. Process Quality Assurance

4.1 Process Management Approach

For each process QA will review/audit, there is a corresponding plan developed by the DIAP3 Core Team. This includes the Quality Assurance process to which this plan applies. QA will review each plan against the applicable standard(s) prior to release and then audit the process against the plan. When a new version of the plan is developed, QA will again review it prior to release. For each review/audit, QA will submit a report to the DIAP3 Core Team.

As part of its process oversight responsibility, QA looks for opportunities for process improvement. QA reviews all recommended process changes, and when approved and implemented, re-reviews the process for effectiveness and the removal of the issue(s) cause.

4.2 Project Process Improvement

4.2.1 Internal QA Activities

QA supports continuous process improvement of project processes and supports process improvements through the following activities:

- Scheduled review and audit of project processes.
- Ad Hoc review and audit of project processes as directed by the Project Managers.
- Informal observations during project meetings
- Sponsor for IV&V audits

4.3 Process Monitoring

4.3.1 Reviews and Audits

QA will review current and newly developed project process plans. Processes, identified in Section 4.3.2 are audited against approved process plans. Audits are performed at a frequency identified in Table 3 Project Processes. They are not precisely scheduled. Dates will be established to minimize interference with project activities while remaining consistent with the need for project quality. The Audit Form in Appendix A will be used, but the form will be tailored for relevance to the individual processes. An audit report will be produced that documents the results of the audits.

4.3.2 Project Processes

The following table represents the project processes that are currently established and utilized for the project. QA will perform an initial review of all project process plans and review against the standards ensuring completeness, consistency, valid inner-

connectivity with external processes and the presence of standards. After the review, any absence of process or process recommendations will be identified and brought forth to the Core Team. The following represents the inventory of current project processes that will be reviewed.

Table 3 Project Processes

Process Name	Standard	Process Owner	Criticality/ Complexity	Core Project Processes				
				Init	Plan	Exec	Mon & Ctrl	Close
Quality Management	IEEE Standards 730-2002 Software Quality Assurance Plans, 1061-1998 Software Quality Metrics Methodology, 1298-1992 Software Quality Management, 8402-1994 Quality Management and Assurance	Quality Manager	High/High		X	X	X	X
Change Management	DGS State Administrative Manual (SAM), Internal Procurement Change Management Plan IEEE Standard 828-1998 IEEE Standard for Software Configuration Management Plans (as it applies to document management.) IEEE 12207 – Problem Resolution Process	Issue, Risk, and Change Manager	High/High	X	X	X	X	X
Requirements Management	IEEE Standard 1233-1996 IEEE Guide for Developing System Requirements Specifications	Requirements Manager	High/Medium		X	X	X	X
Document Management (Includes Configuration Management)	IEEE Standard 828-1998 IEEE Standard for Software Configuration Management Plans (as it applies to document management.)	Librarian and Configuration Manager	High/Medium	X	X	X	X	X
Project Management	IEEE Standard 1058-1998, IEEE Standard for Software Project Management Plans PMBOK, EDD PMM	ITB/DIB Joint Project Managers	High/Medium	X	X	X	X	X

Process Name	Standard	Process Owner	Criticality/ Complexity	Core Project Processes				
				Init	Plan	Exec	Mon & Ctrl	Close
Risk Management	IEEE Standard 1540-2001 IEEE Standard for Software Life Cycle Processes – Risk Management Department of Finance (DOF) Information Technology Project Oversight Framework, Budget Letter 04-04, dated Feb 27, 2004, DOF. State Acquisition Manual, Chapter 4800	Risk Manager/Joint Project Managers	High/Medium	X	X	X	X	X
Acquisition Process DGS	IEEE/EIA 12207.0, Standard for Information Technology Software life cycle processes IEEE 1062, Recommended Practice for Software Acquisition, 8 Dec 98 DGS	Joint Project Managers/BOPSD	High/Medium	X	X			
Communications Management	PMI - PMBOK	Joint Project Managers	High/Low	X	X	X	X	X
Governance		Joint Project Managers	High/Low	X	X	X	X	X
Proposal Evaluation	In accordance with DGS and DOF practices, consistent with RFP Section 10	Joint Project Managers/ System Architect/QA Manager	High/High		X			
Contract Management	DGS, State Administrative Manual State Contracting Manual, April 2004, DGS In accordance with DGS and DOF practices.	Joint Project/Contract Managers	High/Low			X	X	X

4.3.3 Project Process Change

All project process changes will be conducted in compliance with the Change Management Plan.

Appendix A – Products Monitored by QA & QC

Document/Deliverable	Reviews
Project Management Plan	• Internal Review (EDD) • ITB/DIB Project Review • Steering Committee
Schedule	• Internal Review (EDD) • ITB/DIB Project Review • Steering Committee
Configuration Management Plan	• Internal Review (EDD) • ITB/DIB Project Review
IV&V Plan	• Internal Review (EDD) • ITB/DIB Project Review
Library and Document Management Plan	• Internal Review (EDD) • ITB/DIB Project Review
Quality Management Plan	• Internal Review (EDD) • ITB/DIB Project Review
Issue Management Plan	• Internal Review (EDD) • ITB/DIB Project Review
Master Test Plan/Strategy • Data Capture (Interface) • Software Engineering Infrastructure (environment) • ITB Software Application for .Net and SCDB/DI Modifications (unit, integration, and system test plans) • Operational Readiness/Customer Acceptance • Production Readiness	• Internal Review (EDD) • ITB/DIB Project Review
ITB Test Specifications • Operational Readiness/Customer Acceptance • Production Readiness	• Internal Review (EDD) • ITB/DIB Project Review
ITB Test Logs/Reports • Operational Readiness/Customer Acceptance • Production Readiness	• Test Result Review

Appendix B – Example Review and Audit Checklist/Report

Requirements Management Process				**Page**	26
Project Name		Auditor		**Date**	
Plan Name		Auditee		**DIAP3 SharePoint Site Doc Ref#**	

Question/Check	**Evidence Examined**	**Findings and Observations**	**Result**
Has responsibility been assigned for Requirements Management?			
Has the person performing Requirements Management received the required training for that role?			
Does each requirement have a unique identifier?			
Has the RTM been placed under CM control?			
Have the requirements been allocated to the components?			

Is each requirement traceable to a verification method?			
Has a scheduled peer review of the RTM been performed?			
Are changes to the requirements tracked (adds, changes, deletes)			
Is each requirement mapped to a test procedure?			
Result KEY: COM = Complies, MAJ = Major Non-compliance, MIN = Minor Non-compliance, OBS = Observation			

General Comments:
